# Federal Operating Permit
# Article 1

This permit is based upon the requirements of Title V of the Federal Clean Air Act and Chapter 80, Article 1 of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution. Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act, and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

| | | | |
|---|---|---|---|
| Permittee Name: | Intermet Corporation | Registration Number: | 21256 |
| Facility Name: | New River Foundry & Radford Foundry | AFS Number: | 51-121-0081 |
| Facility Location: | 1605 & 1701 West Main Street Radford, Virginia | Permit Number: | VA-21256 |

**January 1, 2004**
Effective Date

**December 31, 2008**
Expiration Date

**December 1, 2003**
Robert G. Burnley Signature Date
Director, Department of Environmental Quality

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# I. Facility Information

**Permittee**
Intermet Corporation
5445 Corporate Drive
Troy, Michigan 48098

**Responsible Official**
Todd Heavin
Vice President - Ferrous Metals

**Facility**
New River Foundry & Radford Foundry
1605 & 1701 West Main Street
Radford, Virginia

**Contact Person**
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Environmental Engineer
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**Registration Number: 21256**
**AFS Identification Number:** 51-121-0081

**Facility Description:** SIC Code 3321 - Establishments primarily engaged in manufacturing gray and ductile iron castings, including cast iron pressure and soil pipes and fittings.

The facility is a gray iron/ ductile iron foundry which produces iron castings for the automotive and other industries. The facility utilizes both cupolas and induction furnaces to melt metal. The facility originated from two distinct sources of air emissions, Lynchburg Foundry Co. (Registration No. 20381) and New River Castings (Registration No. 21083). The facilities operate as two separate companies, but are considered a single source of air emissions. The facilities were combined under a state operating permit to be a single source, Intermet Corporation - Radford Plant, operating as Registration No. 21256. New River Castings is now referred to as New River Foundry, and Lynchburg Foundry Co. is now referred to as Radford Foundry.

## II. Emission Units

Equipment to be operated consists of:

| Emission Unit ID | Stack ID | Emission Unit Description | Size/Rated Capacity* | Pollution Control Device (PCD) Description | PCD ID | Pollutant Controlled | Applicable Permit Date |
|---|---|---|---|---|---|---|---|
| **Radford Foundry (LFC - Lynchburg Foundry Co.) (Max Rated Capacity: 127,750 TPY of metal melted, prior to initiation of emissions trading with New River Foundry, NRC - New River Castings)** | | | | | | | |
| LFE02 through LFE14 | | Core machines | | | | | |
| LFE15 through LFE24 & LFE63 | LFPV14 through LFPV23 | Mold Machines | | | | | |
| LFE25 through LFE26 | | Core Ovens | | | | | |
| LFE27 | LFDC13 | Sand Reclaim Furnace | | Baghouse | LFC13 | Particulate | SOP 6/14/2000 as amended |
| LFE29& LFE30 | LFNPV01 LFNVP06 | Sand Mullers | | | | | |
| LFE31 | | Cupola Combustion Air Preheater | | | | | |
| LFE32 through LFE41 | | Ladle heaters | | | | | |

| Emission Unit ID | Stack ID | Emission Unit Description | Size/Rated Capacity* | Pollution Control Device (PCD) Description | PCD ID | Pollutant Controlled | Applicable Permit Date |
|---|---|---|---|---|---|---|---|
| LFE42 | | Charge preparation | | | | | |
| LFE43 | LFDC16 | Cupola with Dry Powder Injection | | CO afterburner<br>Baghouse | LFC28<br>LFC16 | CO<br>Particulate | SOP 6/14/2000 as amended |
| LFE44 | LFPV01 through LFPV08 | Ladles (transfer and treatment) | | | | | |
| LFE45 & LFE46 | LFPV01 through LFPV08 | Electric induction holding furnaces | | | | | |
| LFE47 | LFDC09 | Pouring | | Baghouse | LFC09 | Particulate | SOP 6/14/2000 as amended |
| LFE48 | LFDC02 | Mold cooling system | | Baghouse | LFC02 | Particulate | SOP 6/14/2000 as amended |
| LFE49 | LFDC12 | Shake out | | Baghouse | LFC12 | Particulate | SOP 6/14/2000 as amended |
| LFE50 | LFPV37 through LFPV40 | Casting cooling system | | | | | |
| LFE61 | LFDC11<br>LFDC12 | Sand & Shot handling | | Baghouse<br>Baghouse | LFC11<br>LFC12 | Particulate<br>Particulate | SOP 6/14/2000 as amended |
| LFE52 through LFE55 | LFDC01<br>LFDC05<br>LFDC06 | Shot blasting machines (No. 2, No. 3, No. 4 No. 5) | | Baghouse<br>Baghouse<br>Baghouse | LFC01<br>LFC05<br>LFC06 | Particulate<br>Particulate<br>Particulate | SOP 6/14/2000 as amended |
| LFE56 through LFE60 | LFDC01<br>LFDC03<br>LFDC07 | Casting finishing lines | | Baghouse<br>Baghouse<br>Baghouse | LFC01<br>LFC03<br>LFC07 | Particulate<br>Particulate<br>Particulate | SOP 6/14/2000 as amended |

| Emission Unit ID | Stack ID | Emission Unit Description | Size/Rated Capacity* | Pollution Control Device (PCD) Description | PCD ID | Pollutant Controlled | Applicable Permit Date |
|---|---|---|---|---|---|---|---|
| LFE62 | LFDC07<br>LFDC08<br>LFDC11 | Sand handling and mold making equipment | | Baghouse<br>Baghouse<br>Baghouse | LFC07<br>LFC08<br>LFC11 | Particulate<br>Particulate<br>Particulate | SOP 6/14/2000 as amended |
| **New River Foundry (NRC - New River Castings) (Permitted Capacity after emission trading with LFC: 250,000 TPY metal melted)** | | | | | | | |
| NRE07 | NRDC12 | Scrap preheater | | Baghouse | NRC12 | Particulate | SOP 6/14/2000 as amended |
| NRE28 through NRE32 | NRDC01<br>NRDC02<br>NRDC12 | Electric induction melting furnaces | | Baghouse<br>Baghouse<br>Baghouse | NRC01<br>NRC02<br>NRC12 | Particulate<br>Particulate<br>Particulate | SOP 6/14/2000 as amended |
| NRE33 & NRE34 | NRDC01<br>NRDC02 | Holding furnaces | | Baghouse<br>Baghouse | NRC01<br>NRC02 | Particulate<br>Particulate | SOP 6/14/2000 as amended |
| NRE35 & NRE36 | NRDC12 | Magnesium treatment | | Baghouse | NRC12 | Particulate | SOP 6/14/2000 as amended |
| NRE37 & NRE38 | NRDC07<br>NRDC10 | Inoculation | | Baghouse<br>Baghouse | NRC07<br>NRC10 | Particulate<br>Particulate | SOP 6/14/2000 as amended |
| NRE57 | | Scrap and metal handling area | | | | | |
| NRE41 | NRDC07 | Line 1 metal pouring | | Baghouse | NRC07 | Particulate | SOP 6/14/2000 as amended |
| NRE42 | NRDC10 | Line 2 metal pouring | | Baghouse | NRC10 | Particulate | SOP 6/14/2000 as amended |
| NRE43 | NRDC07 | Line 1 mold cooling system | | Baghouse | NRC07 | Particulate | SOP 6/14/2000 as amended |
| NRE44 | NRDC03 | Line 2 mold cooling system | | Baghouse | NRC03 | Particulate | SOP 6/14/2000 as amended |

| Emission Unit ID | Stack ID | Emission Unit Description | Size/Rated Capacity* | Pollution Control Device (PCD) Description | PCD ID | Pollutant Controlled | Applicable Permit Date |
|---|---|---|---|---|---|---|---|
| NRE54 | NRDC07<br>NRDC09 | Line 1 shake out | | Baghouse<br>Baghouse | NRC07<br>NRC09 | Particulate<br>Particulate | SOP 6/14/2000 as amended |
| NRE55 | NRDC03<br>NRDC04 | Line 2 shake out | | Baghouse<br>Baghouse | NRC03<br>NRC04 | Particulate<br>Particulate | SOP 6/14/2000 as amended |
| NRE45 | NRDC07<br>NRDC09 | Line 1 casting cooling system | | Baghouse<br>Baghouse | NRC07<br>NRC09 | Particulate<br>Particulate | SOP 6/14/2000 as amended |
| NRE46 | NRDC04 | Line 2 casting cooling system | | Baghouse | NRC04 | Particulate | SOP 6/14/2000 as amended |
| NRE49 through NRE51 | NRDC05<br>NRDC06 | Casting Finishing Lines | | Baghouse<br>Baghouse | NRC05<br>NRC06 | Particulate<br>Particulate | SOP 6/14/2000 as amended |
| NRE24 | NRDC08 | Continuous Blast Machine | | Baghouse | NRC08 | Particulate | SOP 6/14/2000 as amended |
| NRE23 | NRDC03 | Casting Rework/ Sample Blast Machine | | Baghouse | NRC03 | Particulate | SOP 6/14/2000 as amended |
| NRE21 & NRE22 | NRDC06 | Blast Machines | | Baghouse | NRC06 | Particulate | SOP 6/14/2000 as amended |
| NRE47 & NRE48 | NRDC07<br>NRDC03 | Sand binder additive mixers | | Baghouse<br>Baghouse | NRC07<br>NRC03 | Particulate<br>Particulate | SOP 6/14/2000 as amended |
| NRE39 & NRE40 | | Mold Machines | | | | | |
| NRE02 through NRE06 & NRE52 | NRS11<br>NRS12 | Core Machines & Amine gas distribution system | | Acid Scrubber<br>Acid Scrubber | NRCS11<br>NRCS12 | VOC, TEA<br>VOC, TEA | SOP 6/14/2000 as amended |
| NRE25 | | Core drying oven | | | | | |

| Emission Unit ID | Stack ID | Emission Unit Description | Size/Rated Capacity* | Pollution Control Device (PCD) Description | PCD ID | Pollutant Controlled | Applicable Permit Date |
|---|---|---|---|---|---|---|---|
| NRE08 (a, b &c) & NRE09 (a, b, &c) | NRDC03<br>NRDC08 | Core sand heaters | | Baghouse<br>Baghouse | NRC03<br>NRC08 | Particulate<br>Particulate | SOP 6/14/2000 as amended |
| NRE56 | NRDC03<br>NRDC07<br>NRDC09<br>NRDC11 | Storage bins, conveyors, elevators and other sand handling equipment: including mechanical sand reclaim system with natural gas dryer | | Baghouse<br>Baghouse<br>Baghouse<br>Baghouse | NRC03<br>NRC07<br>NRC09<br>NRC11 | Particulate<br>Particulate<br>Particulate<br>Particulate | SOP 6/14/2000 as amended |
| NRE11 through NRE20 | | Ladle heaters | | | | | |
| | | | | | | | |

*The Size/Rated capacity and PCD efficiency is provided for informational purposes only, and is not an applicable requirement.

# III. Process Equipment Requirements – New River & Radford Foundry

## A. Limitations

1. Particulate emissions from the New River Foundry (NRC) production, sand handling, and finishing equipment shall be controlled by fabric filters as identified in Condition No. III.A.6 of this permit. The fabric filters shall be provided with adequate access for inspection.
(9 VAC 5-80-850, VAC 5-50-260, 9 VAC 5-80-110 & Condition 3 of SOP dated 6/14/2000 as amended)

2. VOC emissions from the New River Foundry (NRC) core machines and resin/sand mixing shall be controlled by acid scrubbers, each having a minimum control efficiency of 80 percent. The core machines and scrubbers shall be provided with adequate access for inspection.
(9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 4 of SOP dated 6/14/2000 as amended)

3. Particulate emissions from the Radford Foundry (LFC) production, sand handling, finishing, and EDAP equipment shall be controlled by fabric filters as identified in Condition No. III.A.7 of this permit. The fabric filters shall be provided with adequate access for inspection.
(9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 5 of SOP dated 6/14/2000 as amended)

4. Carbon monoxide emissions from the Radford Foundry (LFC) cupolas shall be controlled by an afterburner.
(9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 6 of SOP dated 6/14/2000 as amended)

5. The consumption of additive powders for the Radford Foundry (LFC) EDAP system shall not exceed 3,360 lb/day and shall not exceed 613 tons/year, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 12 of SOP dated 6/14/2000 as amended)

6. Particulate or PM-10 emissions from the operation of the New River Foundry (NRC) fabric filters shall not exceed the limits specified below:

| Fabric Filter Number | Process(es) | PM or PM-10 Limit, gr/dscf |
|---|---|---|
| NRC DC-1 | Melting | 0.01 |
| NRC DC-2 | Melting | 0.01 |

| Fabric Filter Number | Process(es) | PM or PM-10 Limit, gr/dscf |
|---|---|---|
| NRC DC-3 | Line 2 Mold Cooling, Sand Handling, Shakeout, & Rework | 0.01 |
| NRC DC-4 | Line 2 Cast. Cooling & Shakeout | 0.01 |
| NRC DC-5 | Cleaning & Grinding | 0.01 |
| NRC DC-6 | Cleaning, Grinding, & Blasting | 0.01 |
| NRC DC-7 | Line 1 Sand Handling, Pouring, Cooling, & Shakeout | |
| NRC DC-8 | Blasting & Core Sand Heaters | |
| NRC DC-9 | Sand Handling | |
| NRC DC-10 | Line 2 Pouring | |
| NRC DC-11 | Sand Reclaim System | |
| NRC DC-12 | Melting, Preheating & Metal Treatment | |
| NRC-DC13 | Waste Handling | |

(9 VAC 5-80-850, 9 VAC 5-50-260, 9 VAC 5-80-110 & Condition 14 of SOP dated 6/14/2000 as amended)

7. Particulate or PM-10 emissions from the operation of the Radford Foundry (LFC) fabric filters shall not exceed the limits specified below:

| Fabric Filter Number | Process(es) | PM or PM-10 Limit, gr/dscf |
|---|---|---|
| LFC DC-1 | Finishing, Snag Grind., Rework Blast Machine, & Belt Blast #4 | 0.01 |
| LFC DC-2 | Mold Cooling | 0.01 |
| LFC DC-3 | Finishing Operations | |
| LFC DC-5 | Shotblast Machine No. 2 | 0.01 |
| LFC DC-6 | Shotblast Machine No. 5 | 0.01 |
| LFC DC-7 | Finishing Operations | |
| LFC DC-8 | Sand Transport, Processing & Storage | |
| LFC DC-9 | Metal Pouring & Cupola Forehearth | 0.01 |
| LFC DC-10 | Waste Handling | |
| LFC DC-11 | Sand & Shot Handling Operations | |

| Fabric Filter Number | Process(es) | PM or PM-10 Limit, gr/dscf |
|---|---|---|
| LFC DC-12 | Shakeout, Shot Handling | |
| LFC DC-13 | Sand Transport, Processing & Storage | |
| LFC DC-16 | Cupola/Dry Powder Injection | |

(9 VAC 5-80-850, 9 VAC 5-50-260, 9 VAC 5-80-110 & Condition 15 of SOP dated 6/14/2000 as amended)

8. The approved fuels for the New River Foundry (NRC) scrap preheater, space heaters, ladle heaters, and all sand/core heaters are natural gas and propane. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 7 of SOP dated 6/14/2000 as amended)

9. The approved fuels for the Radford Foundry (LFC) cupola afterburner, cupola combustion air preheater, all space heaters and all sand/core/mold heaters are natural gas and propane. A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 8 of SOP dated 6/14/2000 as amended)

10. The approved fuels for the Radford Foundry (LFC) ladle heaters are No. 2 fuel oil, No. 4 fuel oil, propane and natural gas. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 9 of SOP dated 6/14/2000 as amended)

11. Visible emissions from the New River Foundry (NRC) processes (excluding the VOC scrubbers on core production), including the fabric filter exhaust stacks, shall not exceed five percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A), except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent opacity. There shall be no visible emissions from the VOC scrubber stacks at the New River Foundry. This condition applies at all times except during start-up, shutdown, or malfunction.
(9 VAC 5-50-260, 9 VAC 5-170-160, 9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 16 of SOP dated 6/14/2000 as amended)

12. Visible Emission Requirements for the Radford Foundry:

    a. Visible emissions from the Radford Foundry (LFC Section) Hutchinson Mold Machines (LF24 and LF63), and the exhaust from Fabric Filter Nos. LFC DC-1, DC-2, DC-3, DC-5 through DC-13 and DC-15, shall not exceed five percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A),

except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent opacity. This condition applies at all times except during periods of startup, shutdown and malfunction.
(9 VAC 5-50-260, 9 VAC 5-170-160, 9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 17 of SOP dated 6/14/2000 as amended)

b. During periods of startup, shutdown and malfunction, visible emissions from existing sources (units not exempted per 9 VAC 5-4-10 B) at the Radford Foundry shall not exceed twenty percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A), except during one six-minute period in any one hour in which visible emissions shall not exceed 60 percent opacity.
(9 VAC 5-40-80 & 9 VAC 5-80-850)

13. Prior to completion of the construction required in Condition No. III.A.14:

Visible emissions from the remainder of the Radford Foundry processes and exhaust from fabric filter LFC DC-16 shall not exceed twenty percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A), except during one six-minute period in any one hour in which visible emissions shall not exceed 60 percent opacity.
(9 VAC 5-40-80 & 9 VAC 5-80-110)

After completion of construction required in Condition No. III.A.14, but no later than December 31, 2004:

Visible emissions from all Radford Foundry processes, including fabric filter exhaust stacks, shall not exceed five percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A), except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent opacity. This condition may be met through the permanent shutdown of units unable to meet the 5% opacity limit at the Radford Foundry by December 31, 2004.
(9 VAC 5-170-160, 9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 18 of SOP dated 6/14/2000 as amended)

14. In order to address particulate emissions from the Intermet Corporation facility, Intermet Corporation shall adhere to the following schedule:

a. By April 1, 2003, Intermet Corporation shall submit a revised compliance plan to meet a 5% opacity requirement for the Radford Foundry (LFC) portion of the facility. (This requirement has been met).

b. By April 1, 2003, Intermet Corporation shall submit a revised construction plan and schedule for the implementation of the compliance plan required in a. The compliance plan may be amended to include the option to shut down all or part of the Radford Foundry operation in order to achieve compliance with the 5% opacity limit. (This requirement has been met).

c. By June 1, 2003, provide a status report on installation of any equipment identified in the construction plan required in b., and update the status report quarterly thereafter. If the Radford Foundry is to be shut down, or portions of the operation are to be shutdown to achieve compliance, then the quarterly report shall include the current operating status of the Radford Foundry operations.

d. By December 31, 2004, Intermet shall have completed construction of all equipment identified in the construction plan, or shall have shutdown units at the Radford Foundry that are unable to achieve the 5 % opacity limit. In addition, Intermet shall have completed a demonstration that the impact of respirable particulate ($PM_{10}$) emissions from the combined facility (New River Foundry and Radford Foundry), do not violate state and national ambient air quality standards as listed in Section 9 VAC 5-30-60. The demonstration shall include only emissions from units that are not permanently shutdown.

(9 VAC 5-80-850, 9 VAC 5-80-110, 9 VAC 5-170-160, & Condition 18 of SOP dated 6/14/2000 as amended)

15. Particulate emissions from waste transfer at the Sand Reclaim baghouse (NRC DC-11), Lonestar baghouse (NRC DC-3), Kockums baghouse (NRC DC-4) and the 603 baghouse (NRC DC-7) shall be controlled by full enclosure of the lower portion of each baghouse. Each enclosure shall be equipped with a vacuum system to clean spilled waste in order to prevent waste from escaping the enclosure and becoming airborne.
(9 VAC 5-50-90, 9 VAC 5-80-850, 9 VAC 5-170-160, 9 VAC 5-80-110 & Condition 19 of SOP dated 6/14/2000 as amended)

16. Particulate emissions from the NRC 2070 exterior sand handling chute, the NRC 2070 line scrap/sprue chute, and the NRC 2130 scrap/sprue chute shall be controlled by enclosure.
(9 VAC 5-50-90, 9 VAC 5-80-850, 9 VAC 5-170-160, 9 VAC 5-80-110 & Condition 20 of SOP dated 6/14/2000 as amended)

17. Waste sand, waste dust and debris shall not be handled or stored outside uncovered. The permittee shall construct one or more buildings for waste dust and waste sand handling and loadout. The traffic area outside the waste handling building(s) shall be paved. The area around the outside of the waste handling building(s), including haul roads shall be kept free of waste sand and waste dust.
(9 VAC 5-40-90, 9 VAC 5-50-90, 9 VAC 5-80-850, 9 VAC 5-170-160, 9 VAC 5-80-110 & Condition 21 of SOP dated 6/14/2000 as amended)

18. The NRC metal scrap and charge handling area shall be enclosed to prevent dust from becoming airborne.
(9 VAC 5-50-90, 9 VAC 5-80-850, 9 VAC 5-170-160, 9 VAC 5-80-110 & Condition 22 of SOP dated 6/14/2000 as amended)

19. The maximum sulfur content of the No. 4 fuel oil and the No. 2 fuel oil to be burned by the Radford Foundry (LFC) ladle heaters shall not exceed 1.0 percent by weight and 0.5 percent by weight, respectively, per shipment. The permittee shall obtain a certification from the fuel supplier with each shipment of oil, including, for the No. 4 oil, sampling and analysis representative of each shipment. Each fuel supplier certification shall include the following:

    a. The name of the fuel supplier,

    b. The date on which the oil was received,

    c. The volume and type (No. 2 or No. 4) of oil delivered in the shipment,

    d. The sulfur content of the No. 4 fuel oil,

    e. Documentation of sampling of the No. 4 fuel oil indicating the location of the oil when the sample was drawn,

    f. The method used to determine the sulfur content of the No. 4 fuel oil, or, a statement that the No. 2 fuel oil complies with the American Society for Testing and Materials specifications for fuel oil numbers 1 and 2.

    (9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 25 of SOP dated 6/14/2000 as amended)

20. Emissions shall be controlled by proper operation and maintenance of air pollution control equipment. The permittee shall develop, maintain, and have available to all operators good written operating procedures and a maintenance schedule for the air pollution control equipment. These procedures shall be based on the manufacturer's recommendations, at minimum. Records of service and maintenance shall be maintained on file by the permittee for the most current five year period and shall be made available to DEQ personnel upon request. (See also Condition III.B.4)
    (9 VAC 5-50 20E, 9 VAC 5-40-20E, 9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 26 of SOP dated 6/14/2000 as amended)

21. Sulfur Dioxide emissions from the operation of combustion units shall not exceed the following:

    $S=2.64K$

    S = allowable sulfur emissions in lbs./hr.
    K = actual heat input at total capacity expressed in Btu x $10^6$ per hour

    Units limited by permit to burning only the following fuels are assumed to meet this limit: No.2 fuel oil (sulfur content 0.5% or less), No.4 Fuel Oil (sulfur content 1% or

less) natural gas and/ or propane. This condition does not apply to units exempted by 9 VAC 5-40-240 C.
(9 VAC 5-80-110 and 9 VAC 5-40-280)

22. Particulate emissions from process units that are not controlled by fabric filters which have a 5% opacity limit, shall not exceed the following limits:

| Process Weight Rate Lb/Hr | Maximum Allowable Emission Rate Lb/Hr |
|---|---|
| 1,000 or less | 3.05 |
| 2,000 | 4.70 |
| 3,000 | 6.35 |
| 4,000 | 8.00 |
| 5,000 | 9.05 |
| 6,000 | 11.30 |
| 7,000 | 12.90 |
| 8,000 | 14.30 |
| 9,000 | 15.50 |
| 10,000 | 16.65 |
| 12,000 | 18.70 |
| 16,000 | 21.60 |
| 18,000 | 22.80 |
| 20,000 | 24.00 |
| 30,000 | 30.00 |
| 40,000 | 36.00 |
| 50,000 or more | 42.00 |

(9 VAC 5-80-110 & 9 VAC 5-40-2410 )

**B. Monitoring** (See also Facility Wide Conditions)

1. Fabric Filters: Each fabric filter, except silo/bin vents, shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. The device shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times. Pressure drop shall be checked and recorded at least once per week.
(9 VAC 5-80-110 & Conditions 3 & 5 of SOP dated 6/14/2000 as amended)

2. Acid (VOC) Scrubbers: Each scrubber shall be equipped with a flow meter to indicate scrubber solution flow rate to the spray nozzles, a pH meter to indicate the pH of the scrubber solution as applied, and a device to continuously measure the

differential air pressure drop across the packed bed. Solution flow rate, pH and pressure drop shall be checked and recorded at least once per week.
(9 VAC 5-80-110)

3. Cupola Afterburner: The after burner shall be equipped with a device to continuously measure temperature in the ductwork. The temperature shall be checked and recorded at least once per week.
(9 VAC 5-80-110)

4. The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions:

   a. Develop and maintain a comprehensive air pollution control device maintenance manual to be initially approved by the DEQ. (Manual was initially approved on October 2, 2003). The manual shall include at a minimum:

      (1) A schedule for routine maintenance of all air pollution control devices,

      (2) An inspection schedule, monthly at a minimum, to insure the operational integrity of the air pollution control devices.

   b. Have available written operating procedures for air pollution control equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

   c. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

   d. Maintain an inventory of spare parts that are needed to maintain the air pollution control devices in proper working order to minimize emissions.

Records of maintenance, inspections and training shall be maintained on site for a period of five (5) years and shall be made available to DEQ personnel upon request.
(9 VAC 5-80-110, 9 VAC 5-80-110 F & K, 9 VAC 5-40-20E, 9 VAC 5-50-20 E & Condition 26 of SOP dated 6/14/2000 as amended)

**C. Recordkeeping** (See Facility Wide Conditions)

**D. Testing**

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall

be provided at the appropriate locations.
(9 VAC 5-40-30, 9 VAC 5-50-30 & 9 VAC 5-80-110)

2. If testing is conducted for compliance purposes, in addition to the monitoring specified in this permit, the permittee shall use standardized test methods as approved by the DEQ.
(9 VAC 5-80-110)

**E. Reporting** (See General Conditions)

## IV. Facility Wide Conditions

This facility, as currently configured, will be subject to 40 CFR 63 Subpart EEEEE, National Emission Standards for Hazardous Air Pollutants for Iron & Steel Foundries. The Subpart is not yet final. The facility will comply with Subpart EEEEE according to the compliance schedule contained in the final promulgated version of 40 CFR 63 Subpart EEEEE.

### A. Limitations

1. Upon promulgation of 40 CFR 63 Subpart EEEEE, all affected units shall be operated in accordance with the final promulgated regulation by the compliance date contained therein.

2. Emissions from operation of the combined gray iron/ductile iron foundry shall not exceed the limits specified below:

| | | |
|---|---|---|
| Particulate Matter | 2.04 tons/day | 548.3 tons/yr |
| PM-10 | 2.04 tons/day | 548.3 tons/yr |
| Sulfur Dioxide | 0.48 tons/day | 154.0 tons/yr |
| Nitrogen Oxides (as $NO_2$) | 0.59 tons/day | 203.0 tons/yr |
| Carbon Monoxide | 3.48 tons/day | 926.2 tons/yr |
| Volatile Organic Compounds | 1.23 tons/day | 355.3 tons/yr |

Annual emissions shall be determined monthly, as the sum of each consecutive twelve (12) month period.
(9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 13 of SOP dated 6/14/2000 as amended)

3. The production rate of melted metal shall not exceed 250,000 tons per year for the New River Foundry (NRC) and 127,750 tons per year for the Radford Foundry (LFC). When the New River Foundry (NRC) production rate is above 98,129 tpy, the annual melt rate in the Radford Foundry (LFC) must be reduced based on the annual melt rate in the New River Foundry (NRC) according to the following equation:

$$Y_A = m_A X_A + b_A$$

where: $Y_A$ = New River Foundry (NRC) melt rate, tons/yr
$X_A$ = Radford Foundry (LFC) melt rate, tons/yr
$m_A$ = -9.36 (slope of line)
$b_A$ = 1,293,869 (intercept)

(9 VAC 5-80-800 et seq., 9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 10 of SOP dated 6/14/2000 as amended)

4. The production rate of melted metal shall not exceed 800 tons per day for the New River Foundry (NRC) and 480 tons per day for the Radford Foundry (LFC). When the New River Foundry (NRC) production rate is above 409 tpd, the daily melt rate in the Radford Foundry (LFC) must be reduced based on the daily melt rate in the New River Foundry (NRC) according to the following equation:

$$Y_D = m_D X_D + b_D$$

where: $Y_D$ = New River Foundry (NRC) melt rate, tons/day
$X_D$ = Radford Foundry (LFC) melt rate, tons/day
$m_D$ = -8.46 (slope of line)
$b_D$ = 4,470 (intercept)

(9 VAC 5-80-800 et seq., 9 VAC 5-80-850, 9 VAC 5-80-110 & Condition 11 of SOP dated 6/14/2000 as amended)

5. Fugitive Dust/VOC Emission Controls – Unless specified elsewhere in this permit, Fugitive dust and Fugitive emission controls shall include the following, or equivalent, as a minimum:

   a. Dust from material handling and load-outs, shall be controlled by wet suppression or equivalent (as approved by the DEQ).

   b. The permittee shall plant and maintain an area of vegetation (windbreak, 12 ft tall evergreen trees) between the New River Foundry (NRC) and the Newtown area.

   c. All material being stockpiled shall be kept adequately moist to control dust during storage and handling or covered at all times to minimize emissions.

d. Dust from haul roads and traffic areas shall be controlled by the application of asphalt, water, suitable chemicals, or equivalent methods approved by the DEQ.

e. Reasonable precautions shall be taken to prevent deposition of dirt on public roads and subsequent dust emissions. Trucks leaving the site shall have clean wheels, achieved by use of a wheel washer or equivalent. Dirt, product, or raw material spilled or tracked onto paved surfaces, public or private, shall be promptly removed to prevent particulate matter from becoming airborne.

f. Volatile organic compounds shall not be intentionally spilled, discarded to sewers, stored in open containers, or handled in any other manner that would result in evaporation beyond that consistent with air pollution control practices for minimizing emissions.

(9 VAC 5-80-850, 9 VAC 5-170-160, 9 VAC 5-80-110 & Condition 23 of SOP dated 6/14/2000 as amended)

6. The permittee shall maintain two employees certified in conducting opacity determinations in accordance with 40 CFR Part 60, Appendix A, Method 9 - Visual Determination of Opacity of Emissions from Stationary Sources. If for any reason a certified employee leaves the company, an additional employee shall be certified within a 6 month period.
(9 VAC 5-80-850, VAC 5-170-160, 9 VAC 5-80-110 & Condition 24 of SOP dated 6/14/2000 as amended)

## B. Monitoring

Each emissions unit with a visible emissions requirement in this permit shall be observed visually at least once each calendar month in which the emissions unit operates. Observations shall be conducted more frequently upon request by the DEQ or EPA. Initially, all units shall be observed weekly upon the effective date of this permit, frequency of observations shall continue to be weekly unless otherwise approved in writing by the WCRO compliance manager. The visual observations shall be conducted using 40 CFR 60 Appendix A Method 22 techniques (condensed water vapor/steam is not a visible emission) for at least a brief time to only identify the presence of visible emissions. Each emissions unit in the Method 22 technique observation having visible emissions shall be evaluated by conducting a 40 CFR 60 Appendix A Method 9 visible emissions evaluation (VEE) for at least six (6) minutes, unless corrective action is taken that achieves no visible emissions. 40 CFR 60 Appendix A Method 9 requires the observer to have a Method 9 certification that is current at the time of the VEE. If any of these six (6) minute VEE averages exceed the unit's opacity limitation, a VEE shall be conducted on these emissions for at least 3 six minute periods (at least 18 minutes). All visible emission observations, VEE results, and corrective actions taken shall be recorded.
(9 VAC 5-80-110E)

## C. Recordkeeping

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, West Central Regional Office. These records shall include, but are not limited to:

1. The daily, monthly and annual tons of metal melted in the New River Foundry (NRC). The annual rate shall be calculated monthly as the sum of the previous consecutive 12 month period.

2. The daily, monthly and annual tons of metal melted in the Radford Foundry (LFC). The annual rate shall be calculated monthly as the sum of the previous consecutive 12 month period.

3. The monthly and annual tons of sand handled in the Radford Foundry (LFC). The annual rate shall be calculated monthly as the sum of the previous consecutive 12 month period.

4. The monthly and annual tons of cores produced in the New River Foundry (NRC). The annual rate shall be calculated monthly as the sum of the previous consecutive 12 month period.

5. The monthly and annual usage of propane and natural gas. The annual rates shall be calculated monthly as the sum of the previous consecutive 12 month period.

6. The monthly and annual gallons, each, of No. 2 and of No. 4 fuel oil combusted in the Radford Foundry (LFC). The annual rate shall be calculated monthly as the sum of the previous consecutive 12 month period.

7. Pollutant-specific emission factors and formulas used to calculate actual emission rates for the purpose of determining compliance with each emission limit contained in this permit.

8. Records of all scheduled and non-scheduled maintenance and records of inspection results.

9. Records of monitoring results for the pollution control devices.

These records shall be available on site for inspection by the DEQ and shall be current for the most recent five (5) years.
(9 VAC 5-50-50, 9 VAC 5-80-110 & Condition 29 of SOP dated 6/14/2000 as amended)

**D. Testing**

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the Department, test ports shall be provided at the appropriate locations.
(9 VAC 5-40-30, 9 VAC 5-50-30 & 9 VAC 5-80-110)

2. If testing is conducted for compliance purposes, in addition to the monitoring specified in this permit, the permittee shall use standardized test methods in accordance with procedures approved by the DEQ.
(9 VAC 5-80-110)

**E. Reporting** (See General Conditions)

## V. Insignificant Emission Units

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

| Emission Unit No. | Emission Unit Description | Citation [1] | Pollutant(s) Emitted | Rated Capacity |
|---|---|---|---|---|
| Radford Foundry (LFC) | | | | |
| | LFC Pattern Shop | 9 VAC 5-80-720 C | | |
| LFE01 | Space heaters | 9 VAC 5-80-720 C | | |
| LFE28 | Cupola Afterburners (4 total) | 9 VAC 5-80-720 C | | 4 MMBtu/hr each |
| LFT01 | No. 2 or No. 4 Fuel oil storage tank | 9 VAC 5-80-720 C | | 10,000 gal each |
| LFT02 through LFT04 | Resin storage tanks | 9 VAC 5-80-720 C | | 4,000 gal each |
| LFT05 through LFT12 | Propane storage tanks | 9 VAC 5-80-720 C | | 30,000 gal each |
| | Used oil tank | 9 VAC 5-80-720 C | | 550 gal |
| | Used oil tank | 9 VAC 5-80-720 C | | 275 gal |
| | Engine oil tank | 9 VAC 5-80-720 C | | 275gal |
| | Hydraulic oil tank | 9 VAC 5-80-720 C | | 275 gal |
| | Compressor oil tank | 9 VAC 5-80-720 C | | 275 gal |
| | Unleaded gasoline tank | 9 VAC 5-80-720 C | | 550 gal |
| | Low sulfur diesel tank | 9 VAC 5-80-720 C | | 500 gal |
| | Kereosene tank | 9 VAC 5-80-720 C | | 275 gal |
| New River Foundry (NRC) | | | | |

| Emission Unit No. | Emission Unit Description | Citation [1] | Pollutant(s) Emitted | Rated Capacity |
|---|---|---|---|---|
| | NRC Pattern Shop | 9 VAC 5-80-720 C | | |
| NRE01 | Space heaters | 9 VAC 5-80-720 C | | |
| NRE10 | Moist sand ductwork heaters (2) | 9 VAC 5-80-720 C | | 2.5 MM Btu/hr (each) |
| NRE60 | Emergency Diesel Generator (2130 Disa Equip no. 9593) | 9 VAC 5-80-720 B | | 85 KW/106 KVA |
| NRE61 | Emergency Diesel Generator (Sub 4 Equip no. 9672) | 9 VAC 5-80-720 B | | 75 KW/93.8 KVA |
| NRT01 & NRT02 | Core resin storage tanks | 9 VAC 5-80-720 C | | 8,000 gal each |
| NRT03 through NRT06 | Resin storage tanks | 9 VAC 5-80-720 C | | 550 gal each |
| NRT07 & NRT08 | Propane storage tanks | 9 VAC 5-80-720 C | | 30,000 gal each |
| | Used oil tank | 9 VAC 5-80-720 C | | 1,000 gal |
| | Engine oil tank | 9 VAC 5-80-720 C | | 275 gal |
| | Automatic transmission fluid tank | 9 VAC 5-80-720 C | | 275 gal |
| | Diesel tank | 9 VAC 5-80-720 C | | 1000 gal |
| | Hydraulic fluid tank | 9 VAC 5-80-720 C | | 3,000 gal |
| | Kerosene tank | 9 VAC 5-80-720 C | | 275 gal |
| | Unleaded gasoline tank | 9 VAC 5-80-720 C | | 300 gal |
| | Portable hydraulic oil tanks, 4 total | 9 VAC 5-80-720 C | | 300 gal/ each |
| | Parting fluid tanks, 2 total | 9 VAC 5-80-720 C | | 275 gal/ each |
| | | | | |

[1]The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

These insignificant emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

# VI. Compliance Plan - NA.

# VII. Permit Shield & Inapplicable Requirements

Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

| Citation | Title of Citation | Description of Applicability |
|---|---|---|
| None Identified | | |
| | | |

Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-140)

# VIII. General Conditions

## A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9 VAC 5-80-110 N)

## B. Permit Expiration

This permit has a fixed term of five years. The expiration date shall be the date five years from the effective date of this permit. Unless the owner submits a timely and complete application for renewal to the Department consistent with the requirements of 9 VAC 5-80-80, the right of the facility to operate shall be terminated upon permit expiration.

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the

source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.

3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.

4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C & F, 9 VAC 5-80-110 D & 9 VAC 5-80-170 B)

**C. Recordkeeping and Reporting**

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

   a. The date, place as defined in the permit, and time of sampling or measurements.

   b. The date(s) analyses were performed.

   c. The company or entity that performed the analyses.

   d. The analytical techniques or methods used.

   e. The results of such analyses.

   f. The operating conditions existing at the time of sampling or measurement.

   (9 VAC 5-80-110 F)

2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records

and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
(9 VAC 5-80-110 F)

3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G. (Note that much of the recordkeeping required by this permit also serves as required periodic monitoring to determine emissions compliance and therefore needs to be addressed in the periodic reports.) The details of the reports are to be arranged with the Director, West Central Regional Office. The reports shall include:

   a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.

   b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:

      (1) Exceedance of emissions limitations or operational restrictions;

      (2) Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,

      (3) Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

   c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period."

   d. The report shall be sent to the following address:

      Director, West Central Regional Office
      Attn: Air Compliance Manager
      Virginia DEQ
      3019 Peters Creek Road
      Roanoke, VA 24019

   (9 VAC 5-80-110 F)

## D. Annual Compliance Certification

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and to DEQ no later than **March 1** each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.

2. The identification of each term or condition of the permit that is the basis of the certification.

3. The compliance status.

4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.

5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.

6. Such other facts as the permit may require to determine the compliance status of the source.

This annual compliance certification shall be sent to the following addresses:

Director, West Central Regional Office
ATTN: Air Compliance Manager
Virginia DEQ
3019 Peters Creek Road
Roanoke, VA 24019

Clean Air Act Title V Compliance Certification (3AP00)
U. S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029.

(9 VAC 5-80-110 K.5)

**E. Permit Deviation Reporting**

The permittee shall notify the Director, West Central Regional Office, within four (4) daytime business hours after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within 14 days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition IX.C.3. of this permit.
(9 VAC 5-80-110 F.2 & 9 VAC 5-80-250)

**F. Failure/Malfunction Reporting**

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours after the malfunction is discovered, notify the Director, West Central Regional Office, by facsimile transmission, telephone or telegraph of such failure or malfunction and shall within 14 days of discovery provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Director, West Central Regional Office.
(9 VAC 5-20-180 C)

**G. Startup, Shutdown, and Malfunction**

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(9 VAC 5-50-20 E, 9 VAC 5-40-20 E)

## H. Malfunction as an Affirmative Defense

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.

2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:

   a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.

   b. The permitted facility was at the time being properly operated.

   c. During the period of malfunction, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit.

   d. The permittee notified the board of the malfunction within two working days following the time when the emissions limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. The notice fulfills the requirement of 9 VAC 5-80-110 F.2. b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirements under 9 VAC 5-20-180 C.

3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof.

4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-250)

## I. Fugitive Dust Emission Standards

During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

2. Application of asphalt, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;

4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-90 & 9 VAC 5-50-90)

**J. Severability**

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-110 G.1)

**K. Duty to Comply**

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9 VAC 5-80-110 G.2)

**L. Need to Halt or Reduce Activity not a Defense**

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-110 G.3)

**M. Permit Modification**

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1790, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios. (9 VAC 5-80-190 and 9 VAC 5-80-260)

**N. Property Rights**

The permit does not convey any property rights of any sort, or any exclusive privilege. (9 VAC 5-80-110 G.5)

**O. Duty to Submit Information**

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
   (9 VAC 5-80-110 G.6)

2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
   (9 VAC 5-80-110 K.1)

**P. Duty to Pay Permit Fees**

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-300 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by **April 15** of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department.
(9 VAC 5-80-110 H & 9 VAC 5-80-340 C)

**Q. Alternative Operating Scenarios**

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating

scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1. (9 VAC 5-80-110 J)

**R. Inspection and Entry Requirements**

The permittee shall allow DEQ, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

**S. Reopening For Cause**

The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

1. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

2. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

3. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

**T. Permit Availability**

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9 VAC 5-80-150 E)

**U. Transfer of Permits**

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160)

2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within 30 days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within 30 days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

**V. Permit Revocation or Termination for Cause**

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe, any permit for any of the grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-190 C & 9 VAC 5-80-260)

**W. Duty to Supplement or Correct Application**

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or

incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-80 E)

**X. Stratospheric Ozone Protection**

If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(40 CFR Part 82, Subparts A-F)

**Y. Asbestos Requirements**

The permittee shall comply with the requirements of National Emissions Standards for Hazardous Air Pollutants (40 CFR 61) Subpart M, National Emission Standards for Asbestos as it applies to the following: Standards for Demolition and Renovation (40 CFR 61.145), Standards for Insulating Materials (40 CFR 61.148), and Standards for Waste Disposal (40 CFR 61.150).
(9 VAC 5-60-70 & 9 VAC 5-80-110 A.1)

**Z. Accidental Release Prevention**

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(40 CFR Part 68)

**AA. Changes to Permits for Emissions Trading**

No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110 I)

**BB. Emissions Trading**

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

1. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.

2. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

3. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)

## IX. State-Only Enforceable Requirements

The following terms and conditions are not required under the federal Clean Air Act or under any of its applicable federal requirements, and are not subject to the requirements of 9 VAC 5-80-290 concerning review of proposed permits by EPA and draft permits by affected states.

### A. Limitations

1. Triethylamine emissions from the New River Foundry core machines shall be controlled by packed bed acid scrubbers, each having a minimum control efficiency of 95 percent. The core machines and scrubbers shall be provided with adequate access for inspection.
(9 VAC 5-80-110 N & 9 VAC 5-80-300)

2. Emissions shall be controlled by proper operation and maintenance of air pollution control equipment. The permittee shall develop, maintain, and have available to all operators good written operating procedures and a maintenance schedule for the air pollution control equipment. These procedures shall be based on the manufacturer's recommendations, at minimum. Records of service and maintenance shall be maintained on file by the permittee for the most current five year period and shall be made available to DEQ personnel upon request
(9 VAC 5-40-20 E, 9 VAC 5-50-20 E, 9 VAC 5-80-850, 9 VAC 5-80-110, 9 VAC 5-80-110 N, 9 VAC 5-80-300 & Condition 26 of SOP dated 6/14/2000 as amended)

### B. Monitoring

The scrubbers shall be equipped with a flow meter to indicate scrubber solution flow rate to the spray nozzles, a pH meter to indicate the pH of the scrubber solution as applied, and a device to continuously measure the differential pressure drop across the packed bed. Solution flow rate, pH and pressure drop shall be recorded weekly.
(9 VAC 5-80-850, 9 VAC 5-80-110 N & 9 VAC 5-80-300)

### C. Recordkeeping

The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such

records shall be arranged with the Director, West Central Regional Office. These records shall include records of monitoring equipment readings for the pollution control equipment.
(9 VAC 5-80-110 N & 9 VAC 5-80-300)

**D. Testing - NA.**

**E. Reporting - NA.**